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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/538,468	06/08/2005	Kwang-Jung Yun	69507(301067)	3656

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Edwards Angell Palmer & Dodge LLP
P.O. Box 55874
Boston, MA 02205

EXAMINER	
SYKES, ALTREV C	

ART UNIT	PAPER NUMBER
1786	

NOTIFICATION DATE	DELIVERY MODE
08/24/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patent@eapdlaw.com

Office Action Summary	Application No.	Applicant(s)	
	10/538,468	YUN ET AL.	
	Examiner	Art Unit	
	ALTREV C. SYKES	1786	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 March 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *12-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *12-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *20100309*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March 9, 2010 has been entered. Claims 12-26 are pending.

Response to Arguments

2. Applicant's arguments filed March 9, 2010 have been fully considered. Examiner notes that applicant's arguments are directed to the newly added claim limitations. As such, those limitations will be addressed in the rejections as now set forth below.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 22 and 26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Examiner notes that claims 22 and 26 does not read as a complete thought. It is suggested that applicant amend the claim to include what is supposed to be passing through the hole provided with the first and second bending members. At this time examiner will interpret the claim to include the lateral fiber reinforced polymer strip which was previously recited therein.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 12-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meyer et al. (US 5,735,640) in view of Stevenson et al. (US 5,965,467) in view of Kallmeyer (US 4,095,619).

Regarding claims 12, 16 and 17 applicant claims a method for producing a geogrid, which includes longitudinal fiber-reinforced polymer strips and lateral fiber-reinforced polymer strips that are interconnected at a plurality of junctions to form a lattice structure. Meyer et al. discloses geotextile membranes formed by weaving a number of fill members such as fibrillated polymer strips, with a plurality of warp member sets, which are preferably formed of extruded polymer yarns. (See Abstract) Meyer et al. discloses a lattice structure in Figure 1. Meyer et al. further discloses the fill members and warp members may be arranged as desired within the membrane for a particular application. (See Col 7, lines 47-56)

Applicant claims the method comprising:

(a) providing longitudinal fiber-reinforced polymer strips and lateral fiber-reinforced polymer strips by co-extruding a polymer resin and a longitudinally elongated fiber or fiber bundle.

Meyer et al. discloses the fill members and the warp members may be formed of polymeric material that has been extruded. (See Col 7, lines 30-37 and Col 8, lines 1-3) Meyer et al. discloses other types of members or yarns may be employed as fill members and combinations of such other types of yarns may be employed. (See Col 8, lines 15-19) Meyer et al. is not explicit to co-extruding. Stevenson et al. discloses bonded composite open mesh structural textiles formed of woven textile. The textile is formed from at least two polymeric components. (See Abstract) Stevenson et al. discloses the first and second components may comprise monofilament or multifilament polymeric fiber or bundle with

each fiber being of bicomponent structure. (See Col 4, lines 18-39) As Meyer et al. and Stevenson et al. are both directed to woven textiles, the art is analogous. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize bicomponent yarns produced through co-extrusion of two polymers as taught by Stevenson et al. in place of the polymer yarns as disclosed by Meyer et al. in order to provide a textile wherein each of the fibers therein would be coated on its surface with a polymer resin thereby providing tailored protection of the structure. (See Col 5, lines 12-19)

(b) arranging the longitudinal fiber-reinforced polymer strips in parallel with each other and then bending the longitudinal fiber-reinforced polymer strips at the same time to form ridges and valleys in turns in each of the longitudinal fiber-reinforced polymer strips so that spaces, each of which is closed when viewed in a lateral direction, are formed by at least one of the valleys and at least one of the ridges;

(c) inserting the lateral fiber-reinforced polymer strips into the spaces at the same time to form first contact points at which lower surface portions of the longitudinal fiber-reinforced polymer strips are crossed with corresponding upper surface portions of the lateral fiber-reinforced polymer strips and second contact points at which upper surface portions of the longitudinal fiber-reinforced polymer strips are crossed with corresponding lower surface portions of the lateral fiber-reinforced polymer strips such that the first and second contact points are formed at positions corresponding to the junctions of the lattice structure while not being overlapping; and

Meyer et al. discloses the woven reinforcement membrane comprises a plurality of fill member sets disposed adjacent to one another. A plurality of warp member sets extend in a warp direction so that alternate warp members in each warp member set are positioned on alternate sides of each fill member intersected by the warp member set. (See Col 5, lines 61-67 and Figure 1) Examiner further equates the weave process of Meyer et al. to

the bending of the polymer strips of applicant and for the crossing of longitudinal and lateral strips. Specifically, examiner equates the warp members to the longitudinal strip and the fill members to that of the lateral strips of applicant. Meyer et al. further discloses alternate warp members 14 are separated during the weaving process as a fill member 12 is thrown, and the separation is then inverted at which time another fill member 12 is thrown. As a result, alternate warp members 14 in each set 36 are positioned on the front and back (top and bottom, first and second) sides 38 and 40, respectively, of membrane 10 or fill members 12 intersected by the warp members 14 and the warp member set 36. Additionally, for the same reasons, a particular warp member 14 is preferably positioned alternately on first and second sides 38 and 40 of successive fill members 12 intercepted by the warp member 14 or its set of warp members 36. (See Figure 1 and Col 8, lines 39-50)

Regarding the limitation that the lateral strips be inserted into spaces at the same time, Meyer et al. discloses the weaving process for producing a geogrid may be carried out on conventional loom equipment employed to weave polypropylene or polymeric textiles. (See Abstract and Col 8, lines 51-55) In the filed remarks applicant states that the claimed method would not be conventional to the geogrid producing technology and could not be obtained by a Suzler loom since "one single" weft yarn passes through the "one single" shed. (See pg. 12 of the remarks filed March 9, 2010) Examiner notes that Meyer et al. is not limited to just the use of a Suzler loom. Kallmeyer discloses a machine for inserting cross yarns through an array of longitudinal yarns so as to produce a three-dimensional

weave. (See Abstract) Kallmeyer discloses a typical weave W is normally started by creating a single shed opening O at the center of the array of longitudinal yarns Z and passing a single horizontal yarn X through that opening (FIG. 8a). (See Col 6, lines 38-41) Kallmeyer discloses loom B has the capability of creating two shed openings O at a time, one at each inserter and packer unit 10 and 12. (See Col 6, lines 45-46) As Meyer et al. and Kallmeyer are both directed to weaving process, the art is analogous. As such, examiner notes that at the time of the invention, a conventional loom would have not only included looms which could be used in a weave process to produce a singe shed at a time but also looms which could be used in a weave process to produce multiple sheds at the same time. Therefore, a prima facie case of obviousness exists for the claimed method since the prior art teaches using a loom which inserts the yarn and packs it into the weave, all in one operation. (See Col 1, lines 65-67)

(d) adhering the longitudinal and lateral fiber-reinforced polymer strips to each other at the first and second contact points.

Meyer et al. discloses in the preferred embodiment, the fill members and the warp members intersect. A binder coating is preferably placed on the woven structure, in order to hold the yarns in place. (See Col 6, lines 1-22) The members may be held in place by calendaring, tentering, welding or other conventional techniques and may be wholly or partially used in place of the locking members or in conjunction. (See Col 9, lines 33-38) As such, it is noted by examiner that the method of Meyer et al. is substantially similar to

that of applicant and provides for a very comparable end structure. (See Meyer Figure 1) Stevenson et al. also discloses in accordance with one embodiment where a fusible bonding yarn is used, the woven textile is heated to melt the fusible polymer component, i.e., to melt the monofilament bonding fibers or the sheath of the bicomponent bonding fibers. This causes the fusible polymer component to flow around and encapsulate the other components of the textile and protects, strengthens and stiffens the overall structure and particularly the junctions. (See Col 5, lines 12-19 and 44-48) Therefore, it would have been well within the ordinary skill of one in the art to adhere the warp and fill members of Meyer et al. at first and second contact points as the reference describes several ways for accomplishing holding the members in place including the combination of binder, bonding fibers, and welding.

Regarding claims 13 and 14, it is noted by examiner that applicant discloses the plurality of longitudinal fiber-reinforced polymer strips and the lateral fiber-reinforced polymer strips are crossed in a plain weave structure so that the first and second contact points are alternatively positioned in turns. (See instant specification [0010] and [0028]) Additionally, it is noted by examiner that the type of intersection of the longitudinal strip within the weave structure determines whether it is an n^{th} strip or $n+1^{th}$ strip. Therefore, one of ordinary skill in the art at the time of the invention would expect for the first and second contact points formed in turns as taught by modified Meyer et al. as well as the at least one longitudinal strip is an n^{th} strip to readily be provided for in the method of making a woven structure. Further support for this obviousness is found in the use of like

materials and/or like methods (i.e. a woven structure of polymer yarns) which would result in the claimed property. (See Meyer Fig. 1) The burden is upon the Applicant to prove otherwise.

Regarding claim 15, Meyer et al. further discloses fill members 12 and warp members 14 may be arranged as desired within the membrane such as in desired bundles or sets as shown in FIG. 1, or in any other manner which may be desired for a particular application. (See Col 7, lines 47-56) Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to form at least two second contact points between the first two contact points in at least one of the longitudinal strips. The modification would be motivated by the particular application of the membrane for end use.

Regarding claim 18, Meyer et al. further discloses the coating may be applied by any other desired method including spray coating. The members and other components of the membrane 10 may also or alternatively be held in place using calendaring, tentering, heat welding, ultrasonic welding, RF welding (radio frequency), or other conventional techniques. These may wholly or partially supplant locking members and/or the coating, or they may be used fully in conjunction with either or both. (See Col 9, lines 21-38) Therefore, it would have been well within the ordinary skill of one in the art to adhere the warp and fill members of Meyer et al. at first and second points as the reference describes several ways for accomplishing holding the members in place including the combination

of binder and welding. The fixing of one point with binder while the other is welded would have been completely within the ordinary skill of one in the art at the time of the invention and would accomplish the entirely expected result of holding the yarns in place for a particular end formation.

Regarding claim 19, it is noted by examiner that no further insight is supplied by applicant's disclosure as to adhering the contact points step by step. As such, it is assumed by examiner that the limitation is encompassed in the weaving process and subsequent application of binder (and/or welding) as disclosed by Meyer et al. (See Col 9, lines 21-38)

Regarding claim 20, Meyer et al. further discloses the weaving process may be carried out on conventional loom equipment employed to weave polypropylene or polymeric textiles. (See Col 8, lines 51-55) The warp and fill members may be held in place using calendaring, tentering, heat welding, ultrasonic welding, RF welding (radio frequency), or other conventional techniques. (See Col 9, lines 33-38) Examiner equates the loom of Meyer et al. to a device including a strip arranging means.

Kallmeyer discloses a machine for inserting cross yarns through an array of longitudinal yarns so as to produce a three-dimensional weave. Thus, by rotating the shafts and operating the latching mechanisms it is possible to pass the transfer arm completely

through the array from one end position to the other. As the transfer arm moves from one end position to the traversing position, the free end of the laying arm swings from one end position to the other and lays the weaving yarn through the array of longitudinal yarns to form a cross yarn. The transfer arm is used to pack the most recently laid cross yarn against previously inserted cross yarns by moving the yoke in the direction of the longitudinal yarns with the transfer arm in its traversing position. Means exist for moving the yoke perpendicular to the longitudinal yarns so that another cross yarn may be passed through a different portion of the array of longitudinal yarns. (See Abstract) Kallmeyer discloses a typical weave W is normally started by creating a single shed opening O at the center of the array of longitudinal yarns Z and passing a single horizontal yarn X through that opening (FIG. 8a). (See Col 6, lines 38-41) Kallmeyer discloses the loom B arranges the longitudinal yarns Z in an array composed of a series of horizontal and vertical rows with the yarns Z of any row being parallel (FIG. 8). (See Col 2, lines 62-66) Kallmeyer discloses loom B has the capability of creating two shed openings O at a time, one at each inserter and packer unit 10 and 12. (See Col 6, lines 45-46)

As Meyer et al. and Kallmeyer are both directed to weaving process, the art is analogous. As such, examiner notes that at the time of the invention, a conventional loom would have not only included looms which could be used in a weave process to produce a singe shed at a time but also looms which could be used in a weave process to produce multiple sheds at the same time. Therefore, a prima facie case of obviousness exists for the claimed method since the prior art teaches using a loom which inserts the yarn and packs

it into the weave, all in one operation. (See Col 1, lines 65-67) Further, Kallmeyer discloses the pattern of the weave which is formed need not necessarily be the weave illustrated. On the contrary, a wide variety of weaves are possible with the particular weave pattern being dependent on the various positionings effected by the motors 8 and 31 and the sequence in which the cylinders 46, 60, and 100 are operated in conjunction with the loom B. Therefore, a prima facie case of obviousness exists for the claimed device since the prior art teaches modifications to the loom to provide a desired weave structure. (See Col 2, lines 51-57)

Regarding claim 21, Kallmeyer discloses the yoke 32, and along with it the transfer arm 66, are moved in the direction of the yarns Z by air cylinders 100 which are connected between side bars 20 and the circular frame 2. This causes the slides 22 to move along their respective slideways 14. As the transfer arm 66 moves it passes between two vertical or horizontal rows of yarns Z, or more accurately, through a shed opening O formed in the array of longitudinal yarns Z. To enable the arm 66 to move up to the weaving plane M *without deflecting the longitudinal yarns Z excessively*, that edge of the arm 66 which is presented toward the weaving plane is beveled. The movement afforded by the slides 22 and slideways 14 and imparted by the air cylinders 100 enables a yarn X or Y that has been inserted through a shed opening O to be packed into the previously woven portion of the weave W to extend the weave W still further. (See Col 6, lines 10-26 emphasis added) As such, examiner notes that the loom device as taught by

Kallmeyer provides for a means (i.e support groove) which prevents the longitudinal polymer strips from being deviated during the weaving process.

Regarding claims 22 and 26, Meyer et al. further discloses through holes formed in the warp member 14 so that the fill member 34 is inserted to pass through. (See Figure 2) Additionally, Stevenson et al. discloses through holes formed in the warp and weft direction thereby allowing yarns to pass through. (See Fig. 3B) Kallmeyer discloses the movement afforded by the slides 22 and slideways 14 and imparted by the air cylinders 100 enables a yarn X or Y that has been *inserted through a shed opening O* to be packed into the previously woven portion of the weave W to extend the weave W still further. (See Col 6, lines 10-26 emphasis added)

Regarding claims 23-25, it would have been well within the ordinary skill of one in the art to use conventionally available equipment to provide for adhering the members using heat welding, ultrasonic welding, RF welding, etc. as disclosed by Meyer et al. It would have also been obvious to one of ordinary skill in the art at the time of the invention to utilize welding units known in the art of producing structured members such as geogrids. As evidenced by Thermosonics, Ultrasonic Equipment Article, the type of machinery utilized would have been well within the skill of one in the art and would depend on the provisions necessary for the final product. As Meyer et al. discloses a weaving process in addition to welding, the claim limitations are met by the prior art.

8. Claims 12-17, 19-21, and 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Willibey et al. (US 4,960,349) in view of Neubauer et al. WO 99/28563 and further in view of Kallmeyer (US 4,095,619), Sekiguchi et al. (US 4,980,227) Wimberger-Friedl et al. (US 6,707,885).

Regarding claims 12-17, 19-21, and 23-25 applicant claims a method for producing a geogrid, which includes longitudinal fiber-reinforced polymer strips and lateral fiber-reinforced polymer strips that are interconnected at a plurality of junctions to form a lattice structure. Willibey et al. discloses a woven geotextile grid for earth reinforcement applications. (See Abstract) Willibey et al. discloses the fabric is formed of a plurality of spaced-apart pick yarn bundles which are interwoven with a plurality of space-apart warp yarn bundles. (See Abstract) Willibey et al. discloses such grids can be modified to accommodate various levels of tension and stress for various applications by changing the yarn size, number of yarns, yarn spacing, or simply by changing the loom setup. Such grids may thus be custom tailored for particular applications and installations with a minimum of expense and effort. (See Col 1, lines 55-62) Willibey et al. discloses the grids can be manufactured on looms which are utilized for other types of fabrics. (See Col 2, lines 25-30) Willibey et al. discloses any desired programmable loom may be used. (See Col 3, lines 20-23) Willibey et al. discloses polypropylene yarns may be used as well as any other synthetic (or non-synthetic) yarns. Filaments or yarns of other suitable composition may be used as alternatives. (See Col 4, lines 3-13) As such, examiner notes that a geogrid is taught by the prior which comprises polymeric materials.

Willibey et al. is not explicit to fiber-reinforced polymer strips.

Neubauer et al. discloses a method for producing a geogrid in which longitudinal strips made of fiber-reinforced polymer strips and lateral strips made of thermoplastic polymer resin strips are adhered in a lattice shape. (See Abstract and pg. 3, lines 6-10)

As Willibey and Neubauer et al. are both directed to geogrids, the art is analogous. Therefore, it would have been obvious to one of ordinary skill in the art to produce a geogrid using fiber-reinforced thermoplastic matrix material as taught by Neubauer in place of the yarns as disclosed by Willibey motivated by the desire tailor the grid for reinforcing soil material since Willibey teaches that such modifications may be made as necessary. (See pg. 2, lines 10-15) Modified Willibey is not explicit to bending the fibers of the grid at the same time to form the weave as claimed by applicant.

Kallmeyer discloses a machine for inserting cross yarns through an array of longitudinal yarns so as to produce a three-dimensional weave. (See Abstract) Kallmeyer discloses a typical weave W is normally started by creating a single shed opening O at the center of the array of longitudinal yarns Z and passing a single horizontal yarn X through that opening (FIG. 8a). (See Col 6, lines 38-41) Kallmeyer discloses loom B has the capability of creating two shed openings O at a time, one at each inserter and packer unit 10 and 12. (See Col 6, lines 45-46)

As Willibey et al. and Kallmeyer are both directed to weaving process, the art is analogous. As such, examiner notes that at the time of the invention, a conventional loom would have not only included looms which could be used in a weave process to produce a singe shed at a time but also looms which could be used in a weave process to produce multiple sheds at the same time. Therefore, a prima facie case of obviousness exists for the claimed method since the prior art teaches using a loom which inserts the yarn and packs it into the weave, all in one operation. (See Col 1, lines 65-67)

Further, with respect to forming the geogrid, Sekiguchi et al. discloses a netlike sheet comprises woven warp and weft yarns, either the warp yarns or the weft yarns being a five-layered yarn. (See Abstract) Sekiguchi et al. discloses the layers of the yarns are of polyolefin and thermoplastic synthetic resins. (See Col 2, lines 45-64) Sekiguchi et al. discloses the multilayered flat yarn may also contain fillers. (See Col 2, lines 65-68) Sekiguchi et al. discloses using a weaving loom to form the netlike sheets and then heat-welding the warp and weft yarns at the intersections thereof. (See Col 4, lines 19-23) As such, examiner notes that Sekiguchi et al. discloses a netlike structure having interconnected junctions (i.e. adhered first and second contact points) having a layered yarn of polymeric material.

Therefore, it would have been obvious to one of ordinary skill in the art to utilize the weaving as taught by Sekiguchi et al. for the weaving as taught by Willibey et al.

motivated by the desire to tailor the grid structure for particular applications and installations with a minimum of expense and effort. (See Willibey Col 1, lines 55-62) While Sekiguchi does disclose a flat multilayered yarn, the reference is not explicit to a co-extruded polymer *strip*.

Wimberger-Friedle et al. discloses a method of producing a grid structure using an extrusion process to produce an X-ray scatter grid. (See Abstract) Wimberger-Friedle et al. discloses the strips are made of a polymeric material and may include all thermoplastic polymers and filler material. (Col 3, lines 43-46) Wimberger-Friedle et al. discloses the material flows 13, 12 are co-extruded, the actual extrusion being succeeded by a device for multiplying material strips that are situated one over the other. (See Col 4, lines 6-9) Wimberger-Friedle et al. discloses such input stock strips 12, 13 can be fed to the multiplication device 11 in the form of stacked layers or adjacently arranged layers. The strips are then separately arranged each time perpendicularly to their longitudinal direction. (See Col 4, lines 30-35) Therefore, while not explicit to weaving, examiner notes that Wimberger-Friedle et al. does disclose coextruded polymer strips which may be arranged one over the other.

As the combined prior art references are all directed to grid-like structures, the art is analogous. Therefore, one of ordinary skill in the art would have been easily motivated by the teachings set forth above to arrive at applicant's claimed invention. Examiner notes that the prior art teaches that modification of the loom and the materials used in the

grid structure is done in order to tailor the grid structure for particular applications and installations. Therefore, a prima facie case of obviousness exists for the method and device as claimed by applicant since co-extruding polymer strips and then weaving them to form a grid is taught by the prior art. Further, Sekiguchi is explicit to heat welding the strips at various intersections to provide structures exhibiting a high level of stiffness and excellent retention of sheet-like shape. (See Col 4, lines 33-35)

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kok et al. (US 6,045,923) discloses a co-extruded tape or yarn. Harford (US 5,669,796) discloses a geogrid composed of bicomponent fibers. Marienfeld (US 5,056,960) discloses a layered geosystem. Paulson et al. (US 6,171,984) discloses a geosynthetic material. Riboulet et al. (US 3,909,170) discloses an adjustable flat

spinneret for the coextrusion of flat films comprising a plurality of components. Langston et al. (US 4,643,119) discloses geotextiles having a corrugated synthetic flat yarn of filaments arranged in side-by-side relationship.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALTREV C. SYKES whose telephone number is (571)270-3162. The examiner can normally be reached on Monday-Thursday, 8AM-5PM EST, alt Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Larry Tarazano can be reached on 571-272-1515. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO

Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ACS/
Examiner
8/10/10

/Angela Ortiz/
Supervisory Patent Examiner, Art Unit 1780

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